

FORM PTO-1390
(REV 10-94)

U.S. DEPARTMENT OF COMMERCE PATENT AND TRADEMARK OFFICE

ATTORNEY'S DOCKET NUMBER

TRANSMITTAL LETTER TO THE UNITED STATES
DESIGNATED/ELECTED OFFICE (DO/EO/US)
CONCERNING A FILING UNDER 35 U.S.C. 371

30966.13USWO

U S APPLICATION NO (If known, see 37 C F R. 15)

INTERNATIONAL APPLICATION NO.
PCT/IT97/00130

INTERNATIONAL FILING DATE

PRIORITY DATE CLAIMED

TITLE OF INVENTION

METHOD FOR PRODUCING A COMPOSITE MATERIAL AND MATERIAL OBTAINED BY MEANS OF SAID METHOD

APPLICANT(S) FOR DO/EO/US

VALENTE, Gabriele et al.

Applicant herewith submits to the United States Designated/Elected Office (DO/EO/US) the following items and other information:

1. [X] This is a **FIRST** submission of items concerning a filing under 35 U.S.C. 371.
2. [] This is a **SECOND** or **SUBSEQUENT** submission of items concerning a filing under 35 U.S.C. 371.
3. [X] This express request to begin national examination procedures (35 U.S.C. 371(f)) at any time rather than delay examination until the expiration of the applicable time limit set in 35 U.S.C. 371(b) and PCT Articles 22 and 39(l).
4. [] A proper Demand for International Preliminary Examination was made by the 19th month from the earliest claimed priority date.

5. [X] A copy of the International Application as filed (35 U.S.C. 371(c)(2))
a. [] is transmitted herewith (required only if not transmitted by the International Bureau).
b. [X] has been transmitted by the International Bureau.
c. [] is not required, as the application was filed in the United States Receiving Office (RO/US)
6. [] A translation of the International Application into English (35 U.S.C. 371(c)(2)).

7. [X] Amendments to the claims of the International Application under PCT Article 19 (35 U.S.C. 371(c)(3))
a. [] are transmitted herewith (required only if not transmitted by the International Bureau).
b. [] have been transmitted by the International Bureau.
c. [] have not been made; however, the time limit for making such amendments has NOT expired.
d. [X] have not been made and will not be made.

8. [] A translation of the amendments to the claims under PCT Article 19 (35 U.S.C. 371(c)(3)).

9. [X] An oath or declaration of the inventor(s) (35 U.S.C. 371 (c)(4)).

10. [] translation of the annexes to the International Preliminary Examination Report under PCT Article 36 (35 U.S.C. 371(c)(5)).

Items 11. to 16. below concern document(s) or information included:

11. [] An Information Disclosure Statement under 37 CFR 1.97 and 1.98.

12. [] An assignment document for recording. A separate cover sheet in compliance with 37 CFR 3.28 and 3.31 is included.

13. [X] A FIRST preliminary amendment.
[] A SECOND or SUBSEQUENT preliminary amendment.

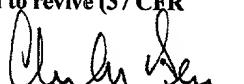
14. [] A substitute specification.

15. [] A change of power of attorney and/or address letter.

16. [] Other items or information:

FEE VALUE	
ACCOUNTABILITY	
DEPOSIT ACCOUNT NO.	
13	2724

FEE VALUE ACCOUNTABILITY	
DEPOSIT ACCOUNT NO.	
13 2724	
FEE CODE	VALUE FURNISHED
961	485
971	420

U.S. APPLICATION NO (If known, see 37 C.F.R. 1.5)X	INTERNATIONAL APPLICATION NO. PCT/IT97/00130	ATTORNEY'S DOCKET NUMBER 90966.13USWO			
17. x The following fees are submitted:		CALCULATIONS PTO USE ONLY			
BASIC NATIONAL FEE (37 CFR 1.492(a) (1)-(5)):					
Search Report has been prepared by the EPO or JPO.....\$910.00					
International preliminary examination fee paid to USPTO (37 CFR 1.482).....\$660.00					
No international preliminary examination fee paid to USPTO (37 CFR 1.482) but international search fee paid to USPTO (37 CFR 1.445(a)(2)).....\$730.00					
Neither international preliminary examination fee (37 CFR 1.482) nor international search fee (37 CFR 1.445(a)(2)) paid to USPTO \$1040.00					
International preliminary examination fee paid to USPTO (37 CFR 1.482) and all claims satisfied provisions of PCT Article 33(2)-(4)\$92.00					
ENTER APPROPRIATE BASIC FEE AMOUNT =		\$1,040.00			
Surcharge of \$130.00 for furnishing the oath or declaration later than [] 20 [] 30 months from the earliest claimed priority date (37 CFR 1.492(e)).		\$0			
CLAIMS		NUMBER FILED	NUMBER EXTRA	RATE	
Total claims	5	-20 =	0	X \$22.00	\$0
Independent claims	2	-3 =	0	X \$78.00	\$0
MULTIPLE DEPENDENT CLAIM(S) (if applicable)				+ \$250.00	\$250.00
TOTAL OF ABOVE CALCULATIONS =		\$			
Reduction by 1/2 for filing by small entity, if applicable. Verified Small Entity Statement must also be filed (Note 37 CFR 1.9, 1.27, 1.28).		-\$520.00			
SUBTOTAL =		\$645.00			
Processing fee of \$130.00 for furnishing the English translation later than [] 20 [] 30 months from the earliest claimed priority date (37 CFR 1.492(f)).		+ \$0			
TOTAL NATIONAL FEE =		\$645.00			
Fee for recording the enclosed assignment (37 CFR 1.21(h)). The assignment must be accompanied by an appropriate cover sheet (37 CFR 3.28, 3.31). \$40.00 per property		+ \$			
TOTAL FEES ENCLOSED =		\$645.00			
				Amount to be: refunded	\$
				charged	\$
<p>a. <input checked="" type="checkbox"/> Checks in the amount of \$520.00 and \$125.00 to cover the above fees are enclosed.</p> <p>b. <input type="checkbox"/> Please charge my Deposit Account No. _____ in the amount of \$ _____ to cover the above fees. A duplicate copy of this sheet is enclosed.</p> <p>c. <input checked="" type="checkbox"/> The Commissioner is hereby authorized to charge any additional fees which may be required, or credit any overpayment to Deposit Account No. 13-2724. A duplicate copy of this sheet is enclosed.</p>					
NOTE: Where an appropriate time limit under 37 CFR 1.494 or 1.495 has not been met, a petition to revive (37 CFR 1.137(a) or (b)) must be filed and granted to restore the application to pending status.					
 <hr/> SIGNATURE. Charles Berman NAME					
SEND ALL CORRESPONDENCE TO: Charles Berman MERCHANT, GOULD, SMITH, EDELL, WELTER & SCHMIDT, P.A. 11150 Santa Monica Boulevard, Suite 400 Los Angeles, California 90025-3395					
<hr/> 29,249 REGISTRATION NUMBER					

**VERIFIED STATEMENT (DECLARATION) CLAIMING SMALL ENTITY
STATUS (37 CFR 1.9(f) and 1.27(b)) - INDEPENDENT INVENTOR**

Insert title of application

As a below named inventor, I hereby declare that I qualify as an independent inventor as defined in 37 CFR 1.9(c) for purposes of paying reduced fees under section 41(a) and (b) of Title 35, United States Code, to the Patent and Trademark Office with regard to the invention entitled METHOD FOR PRODUCING A COMPOSITE MATERIAL()OBTAINED BY ... described in

Check one,
fill in if b)
or c)

> a) the specification filed herewith.
b) application serial no. _____ filed _____.
c) patent no. _____, issued _____.

I have not assigned, granted, conveyed or licensed and am under no obligation under contract or law to assign, grant, convey or license, any rights in the invention to any person who could not be classified as an independent inventor under 37 CFR 1.9(c) if that person had made the invention, or to any concern which would not qualify as a small business concern under 37 CFR 1.9(d) or a nonprofit organization under 37 CFR 1.9(e).

Each person, concern or organization to which I have assigned, granted, conveyed, or licensed or am under obligation under contract or law to assign, grant, convey, or license any rights in the invention is listed below:

Check one

> a) no such person, concern, or organization
b) persons, concerns or organizations listed below

*NOTE: Separate verified statements are required from each named person, concern or organization having rights to the invention averring to their status as small entities. (37 CFR 1.27)

NAME, name
co-inventors

> NAME VALENTE Gabriele
ADDRESS Via Sirtori, 7, 37066 VERONA ITALY
a) INDIVIDUAL b) SMALL BUSINESS CONCERN c) NONPROFIT ORGANIZATION

NAME _____
ADDRESS _____
a) INDIVIDUAL b) SMALL BUSINESS CONCERN c) NONPROFIT ORGANIZATION

I acknowledge the duty to file, in this application or patent, notification of any change in status resulting in loss of entitlement to small entity status prior to paying, or at the time of paying, the earliest of the issue fee or any maintenance fee due after the date on which status as a small entity is no longer appropriate. (37 CFR 1.28(b))

Insert each
inventor

> NAME OF INVENTOR
VALENTE GABRIELE
Signature of Inventor

LAMACCHI ALBERTO
NAME OF INVENTOR
Alberto Lamacchi
Signature of Inventor

Sign

Date

> 12 JANUARY 1999
Date

12 JANUARY 1999
Date

INSTRUCTIONS

INDEPENDENT INVENTOR(S)**VERIFIED STATEMENT (DECLARATION) CLAIMING SMALL ENTITY STATUS (37 CFR 1.9(f) and 1.27(b)) - INDEPENDENT INVENTOR**

As a below named inventor, I hereby declare that I qualify as an independent inventor as defined in 37 CFR 1.9(c) for purposes of paying reduced fees under section 41(a) and (b) of Title 35, United States Code, to the Patent and Trademark Office with regard to the invention entitled
 Insert title of application
 > METHOD FOR PRODUCING A COMPOSITE MATERIAL... described in

Check one,
 Fill in if b)
 or c)

> a) the specification filed herewith.
 b) application serial no. _____ filed _____.
 c) patent no. _____, issued _____.

I have not assigned, granted, conveyed or licensed and am under no obligation under contract or law to assign, grant, convey or license, any rights in the invention to any person who could not be classified as an independent inventor under 37 CFR 1.9(c) if that person had made the invention, or to any concern which would not qualify as a small business concern under 37 CFR 1.9(d) or a nonprofit organization under 37 CFR 1.9(e).

Each person, concern or organization to which I have assigned, granted, conveyed, or licensed or am under obligation under contract or law to assign, grant, convey, or license any rights in the invention is listed below:

Check one
 Fill in if b)
 or c)

> a) no such person, concern, or organization
 b) persons, concerns or organizations listed below

'NOTE: Separate verified statements are required from each named person, concern or organization having rights to the invention averring to their status as small entities. (37 CFR 1.27)

Insert
 co-owners
 Fill in if b)
 or c)

> NAME _____
 ADDRESS _____
 a) INDIVIDUAL b) SMALL BUSINESS CONCERN c) NONPROFIT ORGANIZATION

NAME _____
 ADDRESS _____
 a) INDIVIDUAL b) SMALL BUSINESS CONCERN c) NONPROFIT ORGANIZATION

I acknowledge the duty to file, in this application or patent, notification of any change in status resulting in loss of entitlement to small entity status prior to paying, or at the time of paying, the earliest of the issue fee or any maintenance fee due after the date on which status as a small entity is no longer appropriate. (37 CFR 1.28(b))

I hereby declare that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both under section 1001 of Title 18 of the United States Code, and that such willful false statements may jeopardize the validity of the application, any patent issuing thereof, or any patent to which this verified statement is directed.

Insert each
 Inventor
 Fill in if b)
 or c)

> VALENTE Gabriele
 NAME OF INVENTOR _____ NAME OF INVENTOR _____ NAME OF INVENTOR _____

Sign
 Fill in if b)
 or c)

> _____ Signature of Inventor _____ Signature of Inventor _____ Signature of Inventor _____

Date
 Fill in if b)
 or c)

> 12 JANUARY 1999
 Date _____ Date _____ Date _____

09/214971

800 Rec'd PCT/US 15 JAN 1999
PATENT

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

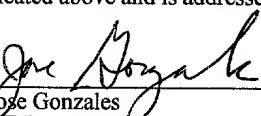
Applicant: VALENTE, Gabriele et al. Examiner: —
Serial No.: — Group Art Unit: —
Filed: January 15, 1999 Docket No.: 30966.13USWO
Title: METHOD FOR PRODUCING A COMPOSITE MATERIAL AND
MATERIAL OBTAINED BY MEANS OF SAID METHOD

CERTIFICATE UNDER 37 CFR 1.10

'Express Mail' mailing label number: EM341183434US

Date of Deposit: January 15, 1999

I hereby certify that this correspondence is being deposited with the United States Postal Service 'Express Mail Post Office To Addressee' service under 37 CFR 1.10 on the date indicated above and is addressed to the Assistant Commissioner for Patents, Washington, D.C. 20231.

By: 
Name: Jose Gonzales

PRELIMINARY AMENDMENT

Assistant Commissioner for Patents
Washington, D.C. 20231

Dear Sir:

Cancel the abstract of International Application No. PCT/IT97/03333 (published under International Publication No. WO 98/03333) and replace it as follows:

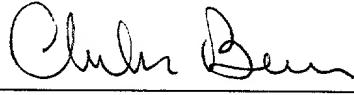
—A supporting material in the form of sheet or roll, constituted by a cellulosic material, or a rolled section in paper treated with a solution, or a rolled section in melaminic paper, or a mixture of leather regenerated materials or derivatives thereof, or cardboard fiber, or needled fabrics, or synthetic or natural rubber, or foam made of reticulated polyethylene with closed cells, or natural or synthetic leather, or non-woven fabric, neoprene, masonite, recycled polyethylene, nylon, Lilion®, Tyvec®, polyester or a net made of synthetic material, or cork or wood, or a coagulated material, or felt, or foamed polyurethane, foamed polyethylene, foamed polystyrene, or a perspiring material, or an agglomerated stone-like material, is coupled to a covering layer

made of polyethylene or Surlyn®, whereby the upper surface of the covering layer is embossed, in such a way as to imitate another material. This composite material has a high surface resistance, thus being particularly suitable for a plurality of applications; furthermore, said composite material is non-toxic and thus usable for contacting the skin also for a long period of time.—

REMARKS

Kindly enter this preliminary amendment before proceeding with the examination for this application.

Respectfully submitted,

By: 
Charles Berman
Reg. No. 29,249

Dated: January 15, 1999
Merchant, Gould, Smith, Edell,
Welter & Schmidt
Westwood Gateway II, Suite 400
11150 Santa Monica Blvd.
Los Angeles, CA 90025-3395

09/214971

800 Rec'd PCT/PTO 15 JAN 1999

1

Article 34

"COMPOSITE MATERIAL AND USE THEREOF"

5

TECHNICAL FIELD

The present invention relates to a composite material which is particularly suitable for being used in footwear manufacturing, specifically for cork soles and/or vamps and/or toes production, as well as for other applications such as spectacle-cases or the like, panellings, suitcases or leather-goods, or chairs or sofas components.

The invention is mainly applied in the fields of footwear industry or in the manufacturing of natural leather or hides, as well as in the manufacturing of furnishing elements.

BACKGROUND ART

Footwear cork soles are usually obtained from sheet or roll supporting materials, which are generally constituted by cellulosic material or regenerated leather.

Said material represents the cork sole support, and a mixture of resins together with a suitable dyestuff is sprayed or spreaded on one side of said material in a suitable industrial plant.

Thereafter, if necessary, the treated surface of the supporting sheets undergoes an embossing operation; finally, said surface is then treated with a paint layer, usually a nitro paint.

Said manufacturing method, as well as the material obtained therewith, involve some disadvantages and drawbacks, among which a low surface resistance of the treated layer, and relatively high production costs can be

principally mentioned.

Document GB-A-1,514,224 deals with multilayer composites which simulate leather and are used in all areas where real leather is generally used, such as upholstery, apparel, handbags, luggage and footwear.

Said multilayer composites are constituted by three essential components: a) textile fabrics which act as supporting substrates; b) crushed foam; c) a surface finish film.

Document DE-A-3,220,768 deals with a process for coupling a TNT substrate to a PVC or PU or PE layer, said TNT substrate being drenched with a polyester resin.

Document DE-A-1,654,451 deals with a process for the production of artificial or simulated leather obtained by coupling a foamed polyurethane to a synthetic layer, e.g. PVC, PE, PP, PA, polyester.

Document GB-A-1,536,421 deals with flexible laminates comprising a first outer layer made of a thermoplastic material: a first backing layer for the first outer layer which is constituted by paper or thin cardboard or woven and non-woven cloth; a second outer layer made of a polymeric material and the backing layer of said second outer layer which is, for example, cardboard, or woven or non-woven textile material.

Document FR-A-2,388,659 deals with the application of a coating made of synthetic resin to a PE foam.

DESCRIPTION OF THE INVENTION

The present invention aims to give a simple and economic solution to the above-mentioned problems and, thus, to provide for a composite material provided with a high surface resistance, thus being particularly suitable for a plurality of applications, such as footwear cork soles or toes, and also parts of suitcases, brief-cases, spectacle-

cases, chairs components or structures, etc., as well as for recycling and regenerating stocks of leather materials, said composite material being non-toxic and thus usable for contacting the skin also for a long period of time.

5 This is obtained by means of the features disclosed in the main claim.

The dependent claims outline particularly advantageous forms of embodiment of the composite material according to the invention.

10 Furthermore, claim 4 discloses the use of said composite material.

According to the present invention, the composite material is constituted by a suitable supporting material, available in sheets or rolls, to which a polyethylene or 15 Surlyn® covering layer is applied, said covering layer being advantageously constituted by a thin film.

Said supporting material is constituted by a material selected from the group comprising:

- 20 cellulosic material in sheets or rolls (for instance Bontex® or Texon®);
- a mixture of leather regenerated materials or derivatives thereof (for instance Salpa);
- natural leather even from stock;
- cork or wood;
- 25 coagulated materials;
- felt;
- a perspiring material such as Goretex® or Simpatex®.

The coupling of the supporting material with the covering layer can be obtained with a cold-working, for 30 instance interposing a suitable double adhesive film between the supporting material and the film made of polyethylene or Surlyn®, or by means of a sprayed or spread adhesive;

alternatively, the coupling of the film can be obtained with a hot-working.

Furthermore, the composite material, which is obtained by coupling the polyethylene or Surlyn® covering layer with 5 the supporting material, is embossed during the coupling operation.

The embossed composite material according to the present invention is non-toxic and presents extraordinary mechanical properties, for instance a very high surface 10 resistance to abrasion or scraping.

Furthermore, according to a form of embodiment, a wool layer or a net is placed over the covering layer.

Besides, a dyestuff layer (physical or sublimatic) can be interposed between the supporting material and the 15 transparent polyethylene or Surlyn® covering layer.

Following to the coupling operation, the resultant composite material may immediately be cut so as to obtain the desired shapes, for instance cork soles or other footwear elements (heels or toes), or wall-paper sheets, 20 suitcase elements, furniture articles, etc.

In this context, it is useful to remark that the composite material according to the invention includes a polyethylene surface layer, which makes it non-toxic and it may freely be used in any applications which come into 25 contact with the human skin, which operation is not possible, for instance, with known composite materials having surface layers made of polyvinylchloride PVC.

As mentioned above, the composite material according to the present invention has a very high surface resistance and 30 can be used in many applications, above all in the footwear field.

In fact, tests demonstrated that this material is particularly suitable for manufacturing cork soles, which

show higher mechanical resistance than those which are typical of the known cork soles, having a paint surface layer; other interesting applications are those concerning the manufacturing of heels or toes or vamps.

5 In this context it is appropriate to note that, in the case where the supporting material is a leather, the application of the polyethylene surface layer gives stability to the supporting material surface, thereby preventing the formation of ashlays, concavities, etc.

10 According to a further form of embodiment of the invention, the supporting material can be sprayed with a leather-like scent prior to embossing. In this case the resulting material cannot be distinguished from real leather any more.

15 Concerning the manufacturing of suitcases and/or brief-cases and/or spectacle-cases or the like, as well as of other natural leather goods, other applications have demonstrated the absolute reliability of the material according to the invention.

20 Furthermore, the material according to the invention may advantageously be applied to the production of chairs or sofas elements or structures.

According to a particular form of embodiment of the material according to the invention, the material itself is
25 provided with a series of perforations or microperforations, which are usually carried out on the sheet or roll before the final cutting according to a predetermined shape or simultaneously to the embossing operation.

In this case the composite material has shown a
30 particular effectiveness in being used as cork sole, since it allows a membrane made of unidirectional transparent material to be arranged between the cork sole and the sole of a footwear, thereby maintaining the foot always dry.

Moreover, the film provided with perforations can be coupled by means of hot-working with a material of the impermeable perspiring type, for instance Goretex® or Simpatex®.

5 A coupling of this type is particularly advantageous since it avoids the perspiring material to be joined to its carrier in a spot-like fashion, as it normally happens according to the known methods.

CLAIMS

1. A composite material, comprising a supporting material in the form of sheet or roll constituted by one of the following materials:

5 - cellulosic material, e.g. Bontex® or Texon®;
 - or a mixture of leather regenerated materials or derivatives thereof, e.g. Salpa®;
 - or natural leather;
 - or cork or wood;
10 - or a coagulated material;
 - or felt;
 - or a perspiring material such as Goretex® or Simpatex®,
15 characterised in that said supporting material is provided with an embossed covering surface layer consisting of a film in polyethylene or Surlyn®.

2. A composite material according to claim 1, characterized in that said supporting material is spread with a leather-like scent prior the embossing operation.

20 3. A composite material according to claim 1 or 2, characterized in that it is provided with a series of perforations or microperforations.

25 4. Use of a composite material, comprising a supporting material in the form of sheet or roll constituted by one of the following materials:

30 - cellulosic material, e.g. Bontex® or Texon®;
 - or a mixture of leather regenerated materials or derivatives thereof, e.g. Salpa®;
 - or natural leather;
 - or cork or wood;
 - or a coagulated material;

- or felt;
- or a perspiring material such as Goretex® or Simpatex®,

5 and an embossed covering surface layer consisting of a film in polyethylene or Surlyn® for producing footwear cork soles and/or heels and/or vamps and/or toes, and/or suitcase elements spectacle-cases and/or brief-cases, and/or chairs or sofas elements or structures or furniture or furnishing elements.

10

MERCHANT & GOULD

United States Patent Application

INSTRUCTIONS

COMBINED DECLARATION AND POWER OF ATTORNEY

As a below named inventor I hereby declare that: my residence, post office address and citizenship are as stated below next to my name; that

I verily believe I am the original, first and sole inventor (if only one name is listed below) or a joint inventor (if plural inventors are named below) of the subject matter which is claimed and for which a patent is sought on the invention entitled:

METHOD FOR PRODUCING A COMPOSITE MATERIAL AND

MATERIAL OBTAINED BY MEANS OF SAID METHOD.

Insert TITLE of invention

Check a or b

The specification of which

a. is attached hereto
b. was filed on _____

If "b" checked, complete

as application serial no. _____
and was amended on _____ (if applicable)

If PCT Application

Insert Int. application
number & filing date

(in the case of PCT-filed application)

described and claimed in international no. PCT/IT97/00130 filed 10 June 1997 (10.6.97)

and as amended on _____ (if any), which I have reviewed and for which I solicit a United States patent.

I hereby state that I have reviewed and understand the contents of the above identified specification, including the claims, as amended by any amendment referred to above.

I acknowledge the duty to disclose information which is material to the examination of this application in accordance with Title 37, Code of Federal Regulations, § 1.56(a). (Reprinted on back side).

I hereby claim foreign priority benefits under Title 35, United States Code, § 119/365 of any foreign application(s) for patent or inventor's certificate listed below and have also identified below any foreign application for patent or inventor's certificate having a filing date before that of the application on the basis of which priority is claimed:

a. no such applications have been filed.
b. such applications have been filed as follows:

FOREIGN APPLICATION(S), IF ANY, CLAIMING PRIORITY UNDER 35 USC § 119			
COUNTRY	APPLICATION NUMBER	DATE OF FILING (day, month, year)	DATE OF ISSUE (day, month, year)
ITALY	VR96A000067	(19.07.96)	

ALL FOREIGN APPLICATIONS, IF ANY, FILED BEFORE THE PRIORITY APPLICATION(S)

COUNTRY	APPLICATION NUMBER	DATE OF FILING (day, month, year)	DATE OF ISSUE (day, month, year)

I hereby claim the benefit under Title 35, United States Code, § 120/365 of any United States and PCT international application(s) listed below and, insofar as the subject matter of each of the claims of this application is not disclosed in the prior United States application in the manner provided by the first paragraph of Title 35, United States Code, § 112, I acknowledge the duty to disclose material information as defined in Title 37, Code of Federal Regulations, § 1.56(a) which occurred between the filing date of the prior application and the national or PCT international filing date of this application.

§ 1.56 Duty to disclose information material to patentability.

(a) A patent by its very nature is affected with a public interest. The public interest is best served, and the most effective patent examination occurs when, at the time an application is being examined, the Office is aware of and evaluates the teachings of all information material to patentability. Each individual associated with the filing and prosecution of a patent application has a duty of candor and good faith in dealing with the Office, which includes a duty to disclose to the Office all information known to that individual to be material to patentability as defined in this section. The duty to disclose information exists with respect to each pending claim until the claim is cancelled or withdrawn from consideration, or the application becomes abandoned. Information material to the patentability of a claim that is cancelled or withdrawn from consideration need not be submitted if the information is not material to the patentability of any claim remaining under consideration in the application. There is no duty to submit information which is not material to the patentability of any existing claim. The duty to disclose all information known to be material to patentability is deemed to be satisfied if all information known to be material to patentability of any claim issued in a patent was cited by the Office or submitted to the Office in the manner prescribed by § 1.97(b)-(d) and 1.98. However, no patent will be granted on an application in connection with which fraud on the Office was practiced or attempted or the duty of disclosure was violated through bad faith or intentional misconduct. The Office encourages applicants to carefully examine:

- (1) prior art cited in search reports of a foreign patent office in a counterpart application, and
- (2) the closest information over which individuals associated with the filing or prosecution of a patent application believe any pending claim patentably defines, to make sure that any material information contained therein is disclosed to the Office.

(b) Under this section, information is material to patentability when it is not cumulative to information already of record or being made of record in the application, and

- (1) It establishes, by itself or in combination with other information, a prima facie case of unpatentability of a claim; or
- (2) It refutes, or is inconsistent with, a position the applicant takes in:
 - (i) Opposing an argument of unpatentability relied on by the Office, or
 - (ii) Asserting an argument of patentability.

A prima facie case of unpatentability is established when the information compels a conclusion that a claim is unpatentable under the preponderance of evidence, burden-of-proof standard, giving each term in the claim its broadest reasonable construction consistent with the specification, and before any consideration is given to evidence which may be submitted in an attempt to establish a contrary conclusion of patentability.

(c) Individuals associated with the filing or prosecution of a patent application within the meaning of this section are:

- (1) Each inventor named in the application;
- (2) Each attorney or agent who prepares or prosecutes the application; and
- (3) Every other person who is substantively involved in the preparation or prosecution of the application and who is associated with the inventor, with the assignee or with anyone to whom there is an obligation to assign the application.

(d) Individuals other than the attorney, agent or inventor may comply with this section by disclosing information to the attorney, agent, or inventor.

continuation-in-Part
Applications,
plete

U.S. APPLICATION NUMBER	DATE OF FILING (day, month, year)	STATUS (patented, pending, abandoned)

I hereby appoint the following attorney(s) and/or patent agent(s) to prosecute this application and to transact all business in the Patent and Trademark Office connected herewith:

Adriano, Sarah B. Reg. No. 34,470 Gabilan, Mary Susan Reg. No. P-38,729 Plukenet, Theodore Reg. No. 37,209
Batali, Brian H. Reg. No. 32,960 Gaines, George H. Reg. No. 33,500 Pollinger, Steven J. Reg. No. 35,336
Bazad, John L. Reg. No. 37,612 Golla, Charles E. Reg. No. 36,826 Reich, John C. Reg. No. 37,703
Beck, Robert C. Reg. No. 28,184 Gorman, Alan G. Reg. No. P-38,473 Reilaud, Earl D. Reg. No. 35,767
Bajin, Thomas E. Reg. No. 37,089 Gould, John D. Reg. No. 38,727 Schmidt, Cecil C. Reg. No. 30,566
Barman, Charles Reg. No. 39,249 Grossen, John J. Reg. No. 33,112 Schuman, Mark D. Reg. No. 31,197
Bogucki, Raymond A. Reg. No. 37,476 Hanve, Curtis B. Reg. No. 36,185 Schumann, Michael D. Reg. No. 30,422
Bruess, Steven C. Reg. No. 34,130 Hausing, Thomas A. Reg. No. 36,159 Sebald, Gregory A. Reg. No. 33,280
Byrne, Linda M. Reg. No. 32,404 Hilton, Randall A. Reg. No. 31,838 Sharp, Junice A. Reg. No. 34,051
Carlson, Alan G. Reg. No. 25,959 Hollingsworth, Mark A. Reg. No. 38,491 Smith, Jerome R. Reg. No. 33,694
Carter, Charles G. Reg. No. 35,093 Kassell, Joseph M. Reg. No. 37,180 Sorensen, Andrew D. Reg. No. 33,606
Caspers, Philip P. Reg. No. 33,222 Kowalczyk, Alan W. Reg. No. 31,335 Stinebruner, Scott A. Reg. No. 38,323
Clifford, John A. Reg. No. 30,247 Kowalczyk, Katherine M. Reg. No. 36,848 Strawbridge, Douglas A. Reg. No. 38,376
Conrad, Timothy R. Reg. No. 30,164 Krull, Mark A. Reg. No. 33,205 Strachoff, Kristine M. Reg. No. 34,259
Crawford, Robert Reg. No. 37,122 Lacy, Paul A. Reg. No. P-38,046 Summer, John P. Reg. No. 39,114
Desgagnault, Runald A. Reg. No. 25,968 Lazky, Michael B. Reg. No. 39,351 Summers, John S. Reg. No. 34,210
Daley, Dennis R. Reg. No. 34,994 Lynch, David W. Reg. No. 36,204 Telekson, David K. Reg. No. 32,114
Daukun, Julie R. Reg. No. 36,314 Mau, Michael L. Reg. No. 30,087 Underhill, Albert L. Reg. No. 37,401
Dempster, Shawn B. Reg. No. 34,327 McDonald, Daniel W. Reg. No. 37,044 Vanburgh, J. Dank Reg. No. 32,179
DiPietro, Mark J. Reg. No. 28,707 McDonald, Wendy M. Reg. No. 32,427 Vietzke, Lance L. Reg. No. 36,708
Edell, Robert T. Reg. No. 30,187 Mueller, Douglas P. Reg. No. 30,300 Weiler, Paul A. Reg. No. 30,891
Farter, Michael B. Reg. No. 34,412 Nelson, Albin J. Reg. No. 38,630 Williams, Douglas J. Reg. No. 27,034
Fauver, Cole M. Reg. No. 36,397 Wond, Gregory B. Reg. No. 28,133

I hereby authorize them to act and rely on instructions from and communicate directly with the person/assignee/attorney/firm/organization/who/which first sends/sent this case to them and by whom/which I hereby declare that I have consented after full disclosure to be represented unless/until I instruct Merchant & Gould to the contrary.

Please direct all correspondence in this case to Merchant, Gould, Smith, Edell, Weiler & Schmidt at the address indicated below (or if no address is specified, the first address):

1 3100 Norwest Center, Minneapolis, MN 55402-4131 1 1000 Norwest Center, St. Paul, MN 55101-2701

Telephone No. (612) 332-5300 Telephone No. (612) 298-1055

3 Suite 400, 11150 Santa Monica Boulevard, Los Angeles, CA 90025-3302
Telephone No. (310) 445-1140

I hereby declare that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under Section 101 of Title 18 of the United States Code and that such willful false statements may jeopardize the validity of the application or any patent issued thereon.

Insert FULL names;
AND addresses) of
actual inventors)

1-00

201	FULL NAME OF INVENTOR	FAMILY NAME <u>VALENTE</u>	FIRST GIVEN NAME <u>GABRIELE</u>	SECOND GIVEN NAME
	RESIDENCE & CITIZENSHIP	CITY <u>VERONA</u>	STATE OR FOREIGN COUNTRY <u>ITALY</u>	COUNTRY OF CITIZENSHIP <u>ITALY</u>
	POST OFFICE ADDRESS	VIA SIRTORI • 7	CITY <u>VERONA</u>	STATE & ZIP CODE/COUNTRY <u>I-37066</u>
202	FULL NAME OF INVENTOR	FAMILY NAME <u>LAMACCHI</u>	FIRST GIVEN NAME <u>ALBERTO</u>	SECOND GIVEN NAME
	RESIDENCE & CITIZENSHIP	CITY <u>SOMMACAMPAGNA (VR)</u>	STATE OR FOREIGN COUNTRY <u>ITALY</u>	COUNTRY OF CITIZENSHIP <u>ITALY</u>
	POST OFFICE ADDRESS	VIA DEL LAVORO 36/b	CITY <u>SOMMACAMPAGNA</u>	STATE & ZIP CODE/COUNTRY <u>I-37066</u>
203	FULL NAME OF INVENTOR	FAMILY NAME	FIRST GIVEN NAME	SECOND GIVEN NAME
	RESIDENCE & CITIZENSHIP	CITY	STATE OR FOREIGN COUNTRY	COUNTRY OF CITIZENSHIP
	POST OFFICE ADDRESS	POST OFFICE ADDRESS	CITY	STATE & ZIP CODE/COUNTRY
	SIGNATURE OF INVENTOR 201		SIGNATURE OF INVENTOR 202	
	<u>John Doe</u>		<u>John Doe</u>	
	DATE	DATE	DATE	
	12 JANUARY 1999	12 JANUARY 1999		

For Additional Inventors:

Check box and attach sheet with same information, including date and signature.